

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
7 June 2001 (07.06.2001)

PCT

(10) International Publication Number  
**WO 01/39816 A3**

(51) International Patent Classification<sup>7</sup>: **A61M 1/00**

(21) International Application Number: **PCT/US00/42544**

(22) International Filing Date: 1 December 2000 (01.12.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
09/452,488 1 December 1999 (01.12.1999) US

(71) Applicant (for all designated States except US): **B. BRAUN MEDICAL, INC.** [US/US]; Suite 150, 1601 Wallace Drive, Carrollton, TX 75006 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WHITE, Gale** [US/US]; 3343 Creek Road, Fort Worth, TX 76180 (US). **KUMMERLEN, Ruth** [US/US]; 8408 Meadow Glade Drive, Frisco, TX 75034 (US). **RAY, Charlotte** [US/US]; 4204 Misty Meadow, Fort Worth, TX 76133 (US). **STAVELY, Roberta** [US/US]; 2707 Spyglass Drive, Carrollton, TX 75007 (US). **HILL, Roger** [US/US]; 2102 Goldenrod Drive, Richardson, TX 75081 (US).

**ZAKREWSKI, Michael, J.** [US/US]; Apt. 2405, 4000 Parkside Center Blvd., Farmers Branch, TX 75244 (US).

(74) Agents: **MONTGOMERY, John, W. et al.**; Haynes and Boone, LLP, 1000 Louisiana, Houston, TX 77002 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

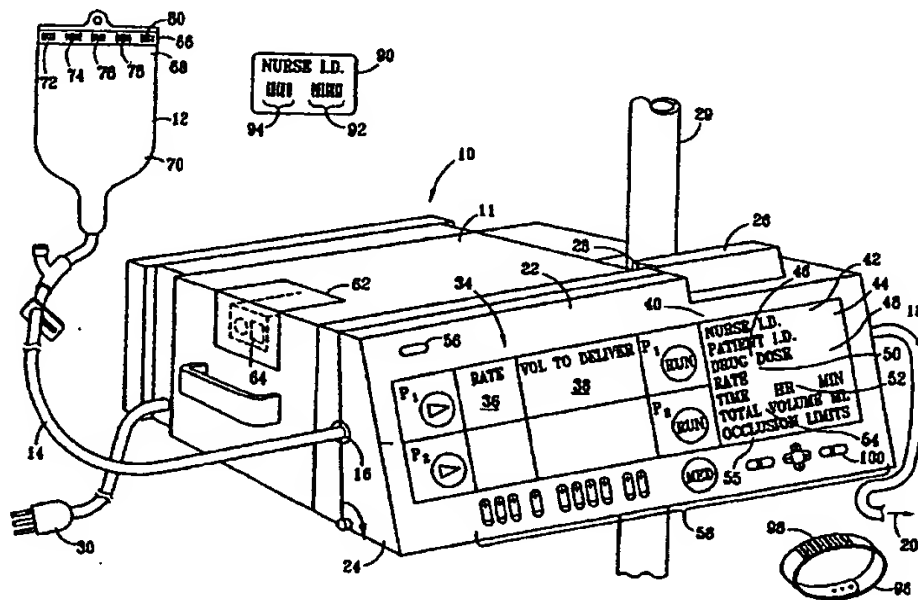
Published:

— with international search report

(88) Date of publication of the international search report:  
10 May 2002

[Continued on next page]

(54) Title: **IMPROVED SECURITY INFUSION PUMP WITH BAR CODE READER**



(57) Abstract: A medical infusion pump (10) with a bar code reader (62) having simplified and enhanced security features. The infusion pump (10) with bar code reader (62) is comprised of an infusion pump with a housing (11), a control display screen (40) and control software for operating the infusion pump according to input infusion data. A bar code reader (62) is contained in the infusion pump housing (11) and operatively attached to communicate scanned bar code infusion data to the pump display screen (40) and to the control software. At least one initialization button (56) for starting execution of a bar code scanning program is operatively connected through circuitry in the pump, the program activating the bar code reader (62) to scan for an authorized user code, for an authorized user ID code (90), for a patient ID code (72), and for infusion data (76, 78, 80) compatible for operating the infusion pump (10). Acceptable scanning of authorization code, authorized user ID code (90), patient ID code (72) and infusion data (76, 78, 80) must be manually confirmed by the authorized user prior to activating the pump to infuse fluids according to the infusion data.

WO 01/39816 A3



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

Best Available Copy

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/42544

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61M 1/00  
US CL : 604/151;705/235

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 604/151, 181,186-189,131,890.1;705/235

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
East

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4,573,994 A ( FISCHELL et al.) 04 March 1986, see fig. 3 and 6, see col. 9-10	1-4
A	US 5,735,263 A ( RUBSAMEN et al.) 07 April 1998, see figures 11-14 and see col.s 8, 11-12,16,26,27, 32-34.	1-4
A	Us 5,871,465 A (VASKO) 16 February 1999, see entire patent	1-4
A	US 4,706,207 A (HENNESSY et al.) 10 November 1987, see entire patent.	1-4

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

01 June 2001 (01.06.2001)

Date of mailing of the international search report

31 JUL 2001

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703)305-3230

Authorized officer

LoAn H Thanh

Telephone No. 703-308-0858